

CLAIMS

Having thus described the invention, what is claimed is:

1. A horizontal adjustment mechanism for use with a chair having a base, a seat supported on the base and defining a fore-to-aft longitudinal axis, and a seat back, the mechanism comprising:

a first plate adapted to be coupled to the seat;

a second plate adapted to be coupled to the base, said second plate being slidably coupled to said first plate such that said first and second plates can move relative to one another along the longitudinal axis of the seat; and

a lever, said lever containing a first mating portion adapted to be releasably received in a recess located in the first plate and a second mating portion including a projection adapted to be releasably received in a plurality of notches located on the second plate wherein said lever is operable to selectively engage the second mating portion and one or more of said notches and is operable to selectively release the second mating portion from one or more of said notches to allow the first plate to move relative to the second plate.

2. The adjustment mechanism as recited in claim 1, wherein an intermediate element is positioned between said first and second plates for facilitating relative sliding movement therebetween;

3. The adjustment mechanism as recited in claim 2, wherein the intermediate element is integral with the bottom surface of the first plate, the second plate, or both;

4. The adjustment mechanism as recited in claim 3, said recess being generally rectangular and located at the midpoint of the first plate.

5. The adjustment mechanism as recited in claim 4, said second mating portion including a plurality of projections.

6. The adjustment mechanism as recited in claim 5, wherein said plurality of notches are integrally formed with said second plate.

7. The adjustment mechanism as recited in claim 6, said second plate further including a plurality of positioning holes arranged in a predetermined pattern and said top plate further including an opening, said opening positioned to align with said holes.

8. The adjustment mechanism as recited in claim 7, said opening including an edge around the perimeter thereof, wherein each said hole is adapted to receive a stop, said stop positioned to restrict said range of fore-to-aft movement of the seat relative to the seat back by engaging selected portions of said opening edge.

9. The adjustment mechanism as recited in claim 8, said first plate further including a lower surface having at least one depending tab, said tab having an upper locking surface, wherein said tab is coupled with said first plate and protrudes from said lower surface by a distance sufficient to define a space between said locking surface of said tab and said lower surface, said space adapted for simultaneous receipt of said intermediate element and said second plate.

10. The adjustment mechanism as recited in claim 9, wherein said at least one depending tab is integrally formed with said first plate.

11. The adjustment mechanism as recited in claim 10, said second plate further including at least one aperture having a pair of longitudinal edges, said aperture including an enlarged portion sized to allow said depending tab to pass there through, wherein said longitudinal edges are positioned to align with said tab, said tab sliding within said aperture to guide relative movement of said first and second plates.

12. The adjustment mechanism as recited in claim 11, wherein said first plate includes four said tabs and said second plate includes four said apertures.

13. The adjustment mechanism as recited in claim 12, said first plate further including a plurality of mounting holes for securing said first plate to a bottom surface of the seat, and said second plate further including a plurality of mounting holes for securing said second plate to an upper surface of the base.

14. The adjustment mechanism as recited in claim 13, wherein said intermediate element is formed from a low-friction material.

15. The adjustment mechanism as recited in claim 10, wherein said intermediate element comprises at least one opening sized to allow said tab to pass there through.

16. The adjustment mechanism as recited in claim 14, said intermediate element further including first and second apertures, wherein said first aperture of said intermediate element is positioned to align with said opening of said first plate and said second aperture of said intermediate element is adapted

to align with said detent of said first plate and said notches of said second plate to facilitate selective, relative sliding movement of said first and second plates.

17. The adjustment mechanism as recited in claim 15, wherein said intermediate element has a longitudinal axis in parallel to the longitudinal axis of said seat, said intermediate element being symmetrical along the longitudinal axis thereof.

18. The adjustment mechanism as recited in claim 15, said intermediate element further including a piece of material protruding from said at least one opening, wherein said piece of material is adapted for receipt in said aperture of said second plate for reducing contact between said first and second plates.

19. The adjustment mechanism as recited in claim 18, wherein said piece of material is integral with said intermediate element.

20. The adjustment mechanism as recited in claim 19, further comprising a means for coupling said first plate, said spacer, and said second plate to one another, wherein said means for coupling can be selectively engaged and released.

21. An adjustment mechanism for use in a chair having a seat defining a fore-to-aft longitudinal axis, a base on which the seat is supported, a seat back, and a tilt control mechanism which allows the seat to be tilted relative to the base, the mechanism comprising:

a first plate adapted to be coupled to a bottom surface of the seat;

a second plate adapted to be coupled to an upper surface of the tilt control mechanism, said second plate being slidably coupled to said first plate such that said first and second plates can move relative to one another along the longitudinal axis of the seat;

a spacer, said spacer positioned between said first and second plates for facilitating relative sliding movement therebetween, wherein said first and second plates cooperate to provide a means for selectively adjusting the seat along the longitudinal axis thereof; and

a lever, said lever containing a first mating portion adapted to be releasably received in a recess located in the first plate and a second mating portion including a projection adapted to be releasably received in a plurality of notches located on the second plate wherein said lever is operable to selectively engage the second mating portion and a selected one of said notches and is operable to selectively release the second mating portion from the selected one of said notches to allow the first plate to move relative to the second plate.

22. A method of constructing a horizontal adjustment mechanism for a chair having a base, a seat supported on the base and defining a fore-to-aft longitudinal axis, and a seat back, the method comprising:

providing a first plate adapted to be coupled to the seat;

providing a second plate adapted to be coupled to the base;

slidably coupling said second plate to said first plate such that said first and second plates can move relative to one another along the longitudinal axis of the seat;

providing an intermediate element, wherein said intermediate element is positioned between said first and second plates for facilitating relative sliding movement therebetween; and

providing a lever, said lever containing a first mating portion adapted to be releasably received in a recess located in the first plate and a second mating portion including a projection adapted to be releasably received in a plurality of notches located on the second plate wherein said lever is operable to selectively engage the second mating portion and a selected one of said notches and is operable to selectively release the second mating portion from the selected one of said notches to allow the first plate to move relative to the second plate.